

REMARKS

Claims 1, 3, 4, 7, and 10 are pending in this application, of which claim 1 has been amended. No new claims have been added.

Claims 1, 3, 4, 7, and 10 stand rejected under 35 U.S.C. §103(a) as unpatentable over Lin et al. (previously applied) in view of Applicant's Admitted Prior art (hereafter "APA") and newly-cited U.S. Patent 3,443,988 to McCormack et al. (hereafter "McCormack et al.").

Applicant respectfully traverses this rejection.

McCormack et al. discloses a method for substantially preventing the extraneous deposition of electroless metal on selected areas of an insulating substrate which comprises providing the insulating substrate in said selected areas with a poison capable of lowering the catalytic activity in the vicinity of surface imperfections which are present in said areas.

McCormack et al. has been cited for teaching that the oxidizing agent is selectively applied to the non-electrode "space" portion, including all the parts of the space portion of less than 30 microns apart.

Applicant respectfully disagrees. Column 5, lines 34-42 disclose:

In a preferred embodiment, the entire surface of the insulating substratum may first be rendered sensitive to the reception of electroless copper. The active, poison containing material may then be applied to limited areas of the base material, as by printing or silk-screen stenciling. Thereafter, the base is contacted with an electroless metal deposition solution to deposit electroless metal on the sensitized areas not coated with the poison containing material.

This passage teaches no more than that only certain areas of a substrate are coated, in contrast to selective coating of "all parts of the space portion" in which the distance between electrodes is smaller than 30 μm , as claimed in the instant application. McCormack et al. fails to disclose with particularity the location of the parts to be coated, while the claimed invention does just that.

APA suggests no more than that the short circuits are more likely to occur in the space portions smaller than 60 μm . Thus, the combination of Lin et al., APA, and McCormack et al. fails to teach, mention or suggest that short circuits tend to remarkably occur in space portions smaller than 30 μm .

Accordingly, claim 1 has been amended to recite this distinction, and the 35 U.S.C. §103(a) rejection should be withdrawn.

Claim 3 stands rejected under 35 U.S.C. §103(a) as unpatentable over Line et al., APA, McCormack and Miller (previously applied).

Applicant respectfully traverses this rejection.

Miller has been cited for teaching that ink jet printing is a well-known printing method for applying materials for electroless plating in selective form but, like other cited references, fails to teach, mention or suggest selectively coating the oxidizing agent to coat all parts of the space portion in which the distance between the electrodes is smaller than 30 μm , as recited in claim 1, from which claim 3 depends.

Thus, the 35 U.S.C. §103(a) rejection should be withdrawn.

Claims 1, 4, and 7 stand rejected under 35 U.S.C. §103(a) as unpatentable over U.S. Patent 4,770,899 to Zeller (hereafter "Zeller") in view of APA and McCormack et al.

Applicant respectfully traverses this rejection.

Zeller discloses a module for interconnecting integrated circuits, comprised of a substrate, a layer of polyimide disposed thereon, and a plurality of spaced apart copper conductors on the layer of polyimide. This module is dipped into a solution of palladium chloride, thereafter it is dipped into a solution of sodium hydroxide, and thereafter it is dipped into an electroless plating solution for cobalt. As a result, a film of cobalt is deposited on all exposed surfaces of the copper conductors, but no cobalt is deposited on the exposed polyimide surface between the conductors. This cobalt film protects the copper conductors from corrosion, and it does not short the conductors together.

Zeller, like APA and McCormack et al. discussed above, fails to teach, mention or suggest selectively coating the oxidizing agent to coat all parts of the space portion in which the distance between the electrode is smaller than 30 μm , as recited in claim 1, from which claims 4 and 7 depend.

Thus, the 35 U.S.C. §103(a) rejection should be withdrawn.

Claim 3 stands rejected under 35 U.S.C. §103(a) as unpatentable over Zeller, APA, McCormack et al. and Miller.

Applicant respectfully traverses this rejection.

As noted above, none of these references teaches, mentions or suggests the noted limitations of claim 1, from which claim 3 depends.

Thus, the 35 U.S.C. §103(a) rejection should be withdrawn.

In view of the aforementioned amendments and accompanying remarks, claims 1, 3, 4, 7, and 10, as amended, are in condition for allowance, which action, at an early date, is respectfully solicited.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 04-1105.

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Respectfully submitted,

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